Attorney's Docket No. 032326-119

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	
Charles Coulier	Group Art Unit: 2663
Application No.: 09/775,668	Examiner: Nittaya Juntima
Filed: February 5, 2001	Appeal No.:
For: CONVEYING PROTOCOL UNITS FOR PORTABLE ELECTRONIC OBJECTS VIA A PROTOCOL FOR MICROCOMPUTER PERIPHERALS	

APPEAL BRIEF

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is from the decision of the Primary Examiner dated February 1, 2005, finally rejecting claims 1-8, which are reproduced as the Claims Appendix of this brief.

☒ A check covering the ☐ $250.00 (2402) ☒ $500.00 (1402) Government fee is filed herewith.

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I. Real Party in Interest

The subject application, and the invention to which it is directed, are assigned to GEMPLUS, a French corporation.

II. Related Appeals and Interferences

There are no prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by, or have a bearing on the Board's decision in this Appeal.

III. Status of Claims

The application contains claims 1-8, all of which are pending. Claims 1, 2, 4 and 7 stand finally rejected. Claims 3, 5, 6 and 8 have been identified as containing allowable subject matter, but are objected to as being dependent from a rejected base claim. This Appeal is directed to claims 1, 2, 4 and 7.

IV. Status of Amendments

An Amendment was filed subsequent to the final Office Action, on June 1, 2005, to incorporate changes suggested during an interview with the Examiner. Entry of this Amendment was denied in an Advisory Action dated June 23, 2005, on the grounds that the proposed changes to the claims raised new issues. Accordingly, the claims appearing in the Claims Appendix do not include the proposed amendments filed on June 1, 2005.

V. Summary of Claimed Subject Matter

The claims are directed to a method for conveying commands from a terminal to a portable electronic object, such as a smart card. The exchange of information between a terminal and a smart card takes place by means of a protocol which employs Application Protocol Data Units (APDUs) to transmit commands from the terminal to the card and responses from the card to the terminal. The format of these data units is defined by a standard that applies to smart cards. (Page 1, lines 9-18). As shown in Figure 2 of the

application, each command includes a header EN, comprising the bytes CLA, INS, P1 and P2, and an optional data field. (Page 5, line 24, to page 7, line 2). Referring to Figure 3, each response has a trailer, as well as an optional data field. (Page 7, lines 3-11). The claimed invention enables transmissions which conform to this protocol to be conveyed over a standardized universal serial bus (USB) that connects microcomputers to peripherals. (Page 2, lines 2-5).

Pursuant to this objective, each downlink transaction, i.e., from the terminal to the portable electronic object, comprises three successive packets of information. Referring to the embodiment depicted in Figure 5, these three packets respectively comprise a token packet OUT that is transmitted from the terminal TE to the portable electronic object CA, a data packet DATA0 transmitted from the terminal to the object, and a handshake packet ACK transmitted from the portable electronic object to the terminal. Each uplink transaction also comprises three packets. Referring again to the exemplary embodiment of Figure 5, the uplink transaction comprises a token packet IN transmitted from the terminal to the object, a data packet DATA1 transmitted from the object to the terminal, and a handshake packet ACK transmitted from the terminal to the object. (Page 9, lines 16-26).

The header of each command is encapsulated in the data field of a data packet for a downlink transaction. As shown in the example of Figure 5, the header EN comprises the respective bytes CLA, INS, P1 and P2, which are located in the data field of the data packet DATA0. The trailer of each response is encapsulated in the data field of the data packet of an uplink transaction. In Figure 5, the trailer is represented by the bytes SW1 and SW2, located in the data field of the uplink data packet DATA1.

VI. Grounds of Rejection to be Reviewed on Appeal

The final Office Action presents a single ground of rejection to be reviewed on Appeal, namely whether claims 1, 2, 4 and 7 are anticipated by the Bastiani et al. patent (US 6,675,243), and therefore unpatentable under 35 U.S.C. §102.

VII. Argument

Claim 1

Claims 1, 2, 4 and 7 stand finally rejected under 35 U.S.C. §102, on the grounds that they are considered to be anticipated by the Bastiani et al. patent. Among other elements, claim 1 recites that each downlink transaction comprises "successively a token packet transmitted from the terminal to the object, a data packet transmitted from the terminal to the object, and a handshake packet transmitted from the object to the terminal." The claim further recites that each uplink transaction comprises "a token packet transmitted from the terminal to the object, a data packet transmitted from the object to the terminal, and a handshake packet transmitted from the terminal to the object."

In pertinent part, the rejection of claim 1 refers to the Bastiani patent at column 38, lines 26-37, which pertains to the command and status access illustrated in Figure 36. Unlike the claimed invention, this portion of the patent does not disclose downlink and uplink transactions that each comprise three successive packets of information. Rather, in the operation of the Bastiani patent, a downlink, transaction comprises only two packets, namely a data packet OUTDATA0 and an acknowledgment packet ACK. There is no disclosure of a token packet which precedes the data packet.

In rejecting the claim, the Office Action alleges that the packet OUTDATA0 comprises a token packet. However, this packet is the same as that which was identified as the *data packet* in the Office Action. Claim 1 clearly recites two distinct packets that are successively transmitted from the terminal to the object in each downlink transaction. The *single* packet OUTDATA0 that is disclosed in the Bastiani patent cannot constitute the two distinct packets recited in the claim. In other words, the Bastiani patent only discloses a data packet that is transmitted from the terminal to the object, and contains no disclosure of a token packet which precedes the data packet. The Office Action has not identified any disclosure suggesting that this single data packet of the Bastiani patent is the same as, or equivalent to, the two distinct packets recited in claim 1.

In responding to Appellant's arguments along these lines, the final Office Action states that the first seven bytes of an OUTDATA0/1 packet (containing the SYN, PT, BC and DT fields) are interpreted to be a token packet, and the remaining bytes (containing the

DATA and CRC fields) are considered to be a data packet. Such an interpretation is not consistent with the commonly understood meaning of the term "packet," nor the disclosure of the Bastiani patent.

The Microsoft Computer Dictionary, Fifth Edition, defines a "packet" as "A unit of information *transmitted as a whole* from one device to another on a network." (emphasis added). See the Evidence Appendix. The Bastiani patent refers to "a 16 byte packet having a DataType 0," which it identifies as OUTDATA0 (column 2, lines 37-38). Given the foregoing definition, a person of ordinary skill in the art would not consider some of the bytes in OUTDATA0 to be a first packet, and the remainder of those bytes to be another packet. Rather, the entire 16 bytes are considered to be a single packet, since that is the unit of information that is transmitted as a whole. The Bastiani patent does not disclose that the first seven bytes are transmitted separately from the remaining bytes.

Furthermore, the Bastiani patent discloses that "All packets begin with a synchronization (SYNC) field..." (column 22, line 9). If the DATA and CRC fields are considered separately from the other fields, as suggested in the Office Action, they do not meet this definition of a packet, since they do not begin with the requisite SYNC field. It is only when all of the fields are considered together that they constitute a packet that conforms with the disclosure of the Bastiani patent.

As set forth in MPEP § 2131, "To Anticipate A Claim, The Reference Must Teach Every Element of the Claim." Neither the Bastiani patent itself, nor the commonly understood meaning of the term "packet", supports the interpretation set forth in the Office Action. In particular, there is no teaching of downlink and uplink transactions that each comprise three successive packets. As such, the Bastiani patent does not anticipate the subject matter of claim 1.

Claim 2

Claim 2 recites that *each* token packet contains an identifier indicating the direction of the transfer of the data packet that succeeds it in a transaction. In rejecting this claim, the Office Action refers to the INSTART packet shown in Figure 36 of the Bastiani patent. This packet was identified, in the rejection of claim 1, as corresponding to the token packet of an uplink transaction. In addition to the token packet for an uplink transaction, claim 1

also defines a token packet for a downlink transaction. Since claim 2 recites that *each* token packet contains an identifier, this means that *both* the downlink token packet and the uplink token packet contain such an identifier. The Office Action does not identify a downlink token packet containing such an identifier. As discussed above in connection with claim 1, the Bastiani patent does not disclose a token packet that is used in connection with a downlink transaction.

In responding to Applicant's argument regarding claim 2, the final Office Action states "the recited claim element 'each token packet' does not reference to both of the downlink token packet and the uplink token packet." From this statement, it appears that the Office Action is interpreting the quoted phrase to encompass only one of the two types of packets, i.e. a downlink token packet or an uplink token packet. Such an interpretation is not in accordance with the commonly understood meaning of the terms. Specifically, The Random House Dictionary of the English Language, Second Edition, defines the term "each" to mean "*every one* of two or more considered individually or one by one" (emphasis added). *See* the Evidence Appendix. To interpret the phrase "each token packet" to mean only one of the two types of packets defined in claim 1 is not consistent with the definition of the term.

For this additional reason, claim 2 is not anticipated by the Bastiani patent.

Claim 4

Claim 4 recites that a plurality of successive transactions each provide a portion of a command or a response. For instance, Figure 7 illustrates an example in which a command is transmitted in a downlink transaction over two successive transactions, in which the first transaction provides the beginning of the command and the second transaction provides the remainder of the command. In rejecting this claim, the Office Action refers to the Bastiani patent at column 25, lines 50-62, and column 26, lines 3-12. These portions of the patent do not disclose the claimed concept. At best, they disclose that two different types of data packets, DATA0 and DATA1, are sent in an alternating sequence. However, the patent does not disclose that the alternating packets each provide a portion of a command or a response.

For this additional reason, the subject matter of claim 4 is not anticipated by the Bastiani patent.

VIII. Claims Appendix

See attached Claims Appendix for a copy of the claims involved in the appeal.

IX. Evidence Appendix

The Evidence Appendix contains a copy of page 395 of the Microsoft Computer Dictionary, Fifth Edition. This evidence was presented to the Examiner in the Amendment filed June 1, 2005.

The Evidence Appendix also includes a copy of a page from the Random House Dictionary of the English Language containing the definition of the word "each." This evidence was also presented to the Examiner with the Amendment filed June 1, 2005.

X. Related Proceedings Appendix

(None)

XI. Conclusion

As shown above, the Bastiani et al. patent does not disclose every limitation that is recited in the rejected claims. The interpretations of the patent that are set forth in the final Office Action are not consistent with either the teachings of the patent itself, nor the common meaning of the claim terms, as understood by one of ordinary skill in the art.

The rejection is not properly founded in the statute, and should be reversed.

Respectfully submitted,

Buchanan Ingersoll PC

Date September 30, 2005

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VIII. CLAIMS APPENDIX

The Appealed Claims

1. A method of conveying commands from a terminal to a portable electronic object, every command having a header, and some of the commands having a data field, and responses from the portable electronic object to the terminal, some of the responses having a data field, and every response having a trailer, said method comprising the following steps:

interchanging transactions by means of a bus between the terminal and the object, each downlink transaction comprising successively a token packet transmitted from the terminal to the object, a data packet transmitted from the terminal to the object, and a handshake packet transmitted from the object to the terminal, and each uplink transaction comprising a token packet transmitted from the terminal to the object, a data packet transmitted from the object to the terminal, and a handshake packet transmitted from the terminal to the object;

encapsulating the header of each command in a data field of data packets of a downlink transaction, and the data field of a command, when such a data field exists, in the data field of at least one downlink transaction; and

encapsulating the data field, when such a data field exists, and the trailer of each response in the data field of the data packet of at least one uplink transaction.

2. A method according to claim 1, in which each token packet contains an identifier indicating the direction of the transfer of the data packet succeeding it in a transaction.

3. A method according to claim 2, in which the token packet of each transaction relating to the transfer of at least a portion of the data field of a command or of a response contains an identifier indicating the direction of the transfer of the data packet succeeding it in said transaction.

4. A method according to claim 1, in which the token packet of the first transaction in a sequence of a plurality of successive transactions each providing a portion

of a command or a response contains an identifier announcing the beginning of the sequence.

5. A method according to claim 1, in which the data field of a data packet in the downlink transaction containing the header of a command also contains the expected length of the data field of a response succeeding said command and/or the length of the data field of said command.

6. A method according to claim 1, wherein the data field of a data packet of an uplink transaction containing the beginning of the data field of a response also contains the working length of the data field of said response, and wherein padding bits, whose number is proportional to the difference between the expected length of the data field of said response included in a preceding command and the working length, are contained in the data field of the data packet of the second uplink transaction containing the trailer of said response.

7. A method according to claim 1, in which the beginning of the data field of a data packet in the downlink transaction containing the header of a command also contains an identifier of the format of the command.

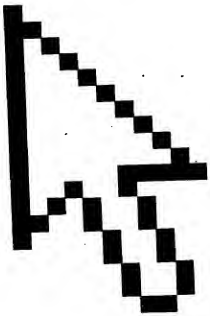
8. A method according to claim 1, in which the uplink transaction containing the data packet in which the beginning of the response is encapsulated is preceded by a downlink transaction in which the token packet contains an identifier indicating the beginning of an uplink transaction sequence, and wherein the data packet of said uplink transaction has a structure identical to the structure of the data packet of a downlink transaction containing the header of a command, and contains an identifier for identifying the format of said response, and the expected length of the data field of said response.

IX. EVIDENCE APPENDIX

Microsoft

Microsoft Computer Dictionary

Fifth Edition



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P

p *prefix* *See* pico-.

P *prefix* *See* peta-.

P2P or P-to-P *n.* An Internet-based networking option in which two or more computers connect directly to each other to communicate and share files without use of a central server. Interest in P2P networking blossomed with the introduction of Napster and Gnutella. Short for Peer-to-Peer. *See also* peer-to-peer architecture, peer-to-peer communications.

P3P *n.* Acronym for Platform for Privacy Preferences. An open W3C protocol that allows Internet users to control the type of personal information that is collected by the Web sites they visit. P3P uses User Agents built into browsers and Web applications to allow P3P-enabled Web sites to communicate privacy practices to users before they log on to the Web site. P3P compares the Web site's privacy policies with the user's personal set of privacy preferences, and it reports any disagreements to the user.

P5 *n.* Intel's internal working name for the Pentium microprocessor. Although it was not intended to be used publicly, the name P5 leaked out to the computer-industry trade press and was commonly used to reference the microprocessor before it was released. *See also* 586, Pentium.

pack *vb.* To store information in a more compact form. Packing eliminates unnecessary spaces and other such characters and may use other special methods of compressing data as well. It is used by some programs to minimize storage requirements.

package *n.* **1.** A computer application consisting of one or more programs created to perform a particular type of work—for example, an accounting package or a spreadsheet package. **2.** In electronics, the housing in which an electronic component is packaged. *See also* DIP. **3.** A group of classes or interfaces and a keyword in the Java programming language. Packages are declared in Java by using the "package" keyword. *See also* class, declare, interface (definition 1), keyword.

packaged software *n.* A software program sold through a retail distributor, as opposed to custom software. *See also* canned software.

packed decimal *adj.* A method of encoding decimal numbers in binary form that maximizes storage space by using each byte to represent two decimal digits. When signed decimal numbers are stored in packed decimal format, the sign appears in the rightmost four bits of the rightmost (least significant) byte.

packet *n.* **1.** A unit of information transmitted as a whole from one device to another on a network. **2.** In packet-switching networks, a transmission unit of fixed maximum size that consists of binary digits representing both data and a header containing an identification number, source and destination addresses, and sometimes error-control data. *See also* packet switching.

packet assembler and disassembler *n.* *See* packet assembler/disassembler.

packet assembler/disassembler *n.* An interface between non-packet-switching equipment and a packet-switching network. *Acronym:* PAD.

packet filtering *n.* The process of controlling network access based on IP addresses. Firewalls will often incorporate filters that allow or deny users the ability to enter or leave a local area network. Packet filtering is also used to accept or reject packets such as e-mail, based on the origin of the packet, to ensure security on a private network. *See also* firewall, IP address, packet (definition 1).

packet flooding *n.* A technique employed in a number of DoS (denial of service) attacks in which a flood of packets of data are sent to a target server, overwhelming the computer and rendering it unable to respond to legitimate network requests. Examples of specific types of packet flooding include smurf attacks and SYN flood attacks. *See also* DoS, packet, smurf attack, SYN flood.

packet header *n.* The portion of a data packet that precedes the body (data). The header contains data, such as

THE RANDOM HOUSE DICTIONARY OF THE ENGLISH LANGUAGE

Second Edition

Unabridged

Dedicated to the memory of
Jess Stein

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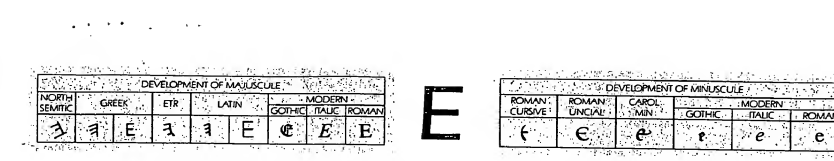


The fifth letter of the English alphabet developed from North Semitic *he*. Originally a consonant with an *h*-sound, it was transformed into a vowel in Greek, although in Classical Greek and in certain local alphabets North Semitic *heth* [see H] was used to represent *eta* (long *e*). The minuscule (*e*) was derived from the capital (*E*) through the uncial form.

E, e (ē), *n., pl.* **E's or Es, e's or es. 1.** the fifth letter of the English alphabet, a vowel. **2.** any spoken sound represented by the letter *E* or *e*, as in *met, meet, mere,* etc. **3.** something having the shape of an *E*. **4.** a written or printed representation of the letter *E* or *e*. **5.** a device, as a printer's type, for reproducing the letter *E* or *e*.

E, *A.* east. **2.** eastern. **3.** English. **4.** excellent. **5.** Expressway.

E, *Symbol.* **1.** the fifth in order or in a series. **2.** (*sometimes Lc.*) (in some grading systems) a grade signifying poor, as in school or college, indicating the quality of a student's work is in need of improvement in order to be passing. **3.** *Music.* **a.** the third tone in the scale of C major or the fifth tone in the relative minor scale, A minor. **b.** a string, key, or pipe tuned to this tone. **c.** a written or printed note representing this tone. **d.** (in the fixed system of solmization) the third tone of the scale of C major, called mi. **e.** the tonality having E as the tonic note. **4.** (*sometimes Lc.*) the medieval Roman numeral for 250. Cf. **Roman numerals.** **5.** *Physics, Elect.* **a.** electric field. **b.** electric field strength. **6.** *Physics.* energy. **7.** *Biochem.* See **glutamic acid.** **8.** *Logic.* See **universal negative.** **9.** a proportional shoe width size narrower than EE and wider than D.

e, *1.* electron. **2.** *Physics.* elementary charge.

e, *Symbol.* **1.** *Math.* a transcendental constant equal to 2.7182818 . . . , used as the base of natural logarithms; the limit of the expression $(1+1/n)^n$ as n approaches infinity. **2.** *Logic.* See **universal negative.**

e-, var. of **ex-**1, occurring in words of Latin origin before consonants other than *c, f, p, q, s,* and *t*: *emit.*

E., **1.** Earl. **2.** Earth. **3.** east. **4.** Easter. **5.** eastern. **6.** engineer. **7.** engineering. **8.** English.

e., **1.** eldest. **2.** *Football,* end. **3.** engineer. **4.** engineering. **5.** entrance. **6.** *Baseball* error; errors.

E-a (ā′ä), *n.* the Akkadian god of wisdom, the son of Apsu and father of Marduk: the counterpart of Enki.

-ea, a suffix occurring in loanwords from Latin: *cornea.* [< L *-ēa, -aea, -ea,* fem. sing. and neut. pl. of *-ēus, -aeus, -eus* see **-EAN**]

ea., each.

E.A.A., Engineer in Aeronautics and Astronautics.

each (ēch), *adj.* **1.** every one of two or more considered individually or one by one: *each stone in a building; a hallway with a door at each end.* —*pron.* **2.** every one individually; each one: *Each had a different solution to the problem.* —*adv.* **3.** to, from, or for each; apiece: *They cost a dollar each.* [bef. 900; ME *eche,* OE *ælc* equiv. to *ā* ever (see AY1) + (*ge*)*lic* ALIKE; c. OHG *ēogilīh,* OFris *elik,* D, LG *elk*]

—**Syn. 1.** EACH, EVERY are alike in having a distributive meaning. Of two or more members composing an aggregate, EACH directs attention to the separate members in turn: *Each child* (of those considered and enumerated) *received a large apple.* EVERY emphasizes inclusiveness or universality: *Every child* (of all in existence) *likes to play.*

—**Usage.** The adjective EACH is always followed by a singular noun: *each person; each book.* When the adjective follows a plural subject, the verb agrees with the subject: *They each dress in different styles. The houses each have central heating.* When the pronoun EACH comes immediately before the verb, it always takes a singular verb: *Each* (one) *has come from a different country.* When the pronoun is followed by an *of* phrase containing a plural noun or pronoun, there is a tendency for the verb to be plural: *Each of the candidates has* (or *have*) *spoken on the issue.* Some usage guides maintain that only the singular verb is correct, but plural verbs occur frequently even in edited writing.

It is also sometimes said that the pronoun EACH must always be referred to by a singular pronoun, but again actual usage does not regularly observe this stricture: *Each member of our garden club had their own special interests.* In the most formal speech and writing, singular verbs and pronouns occur more frequently than plural: *Each member . . . had his own special interests.* The use of plural forms, especially plural pronouns, has been current in the United States, partially because of the desire to avoid using *he* or *his* to refer to a female.

ANYONE, ANYBODY, EVERYONE, EVERYBODY, NO ONE, SOMEONE, and SOMEBODY follow EACH the same general patterns of pronoun agreement as EACH. See also **they.**

each′ oth′er, each the other; one another (used as a compound reciprocal pronoun): *to strike at each other; to hold each other's hands; to love each other.* [bef. 1000; ME, OE. See EACH, OTHER]

—**Usage.** Although some insist that EACH OTHER be used only in reference to two (*The two candidates respected each other*) and ONE ANOTHER in reference to three or more (*The three nations threaten one another*), in standard practice they are interchangeable. EACH OTHER is not restricted to two, nor is ONE ANOTHER restricted to three or more.

The possessive of EACH OTHER is *each other's*; the possessive of ONE ANOTHER is *one another's.*

ead-, (in prescriptions) the same. [< L *eādem*]

Ead-mund I (ēd′mənd, ād′mönd′). See **Edmund I.**

Eadmund II. See **Edmund II.**

Eads (ēdz), *n.* **James Buchanan,** 1820–87, U.S. engineer and inventor.

Ead-wine (ed′win, ād′win′ə), *n.* Edwin (def. 1).

-eae, plural of **-ea:** *tracheae.*

Ea-gan (ā′gən), *n.* a town in SE Minnesota. 20,532.

ea-ger (ē′gər), *adj.* **1.** keen or ardent in desire or feeling; impatiently longing: *I am eager for news about them. He is eager to sing.* **2.** characterized by or revealing great earnestness: *an eager look.* *Obs.* keen; sharp; biting. [1250–1300; ME *egre* < AF, OF *egre, aigre* < VL **acrus* for L *ācer* sharp] —**ea′ger-ly,** *adv.* —**ea′ger-ness,** *n.*

—**Syn. 1.** enthusiastic, desirous. See **avid. 2.** fervent, zealous, fervid, intent, intense, earnest. —**Ant. 1, 2.** indifferent, uninterested. **2.** lackadaisical.

ea-ger2 (ē′gər, ā′gər), *n. Chiefly Brit.* eagre.

ea′ger bea′ver (ē′gər), a person who is excessively diligent or overly zealous. [1940–45, *Amer.*]

ea-gle (ē′gəl), *n., v.,* **-gled, -gling.** —*n.* **1.** any of several large, soaring birds of prey belonging to the hawk family Accipitridae, noted for their size, strength, and powers of flight and vision: formerly widespread in North America, eagles are mostly confined to Alaska and a few isolated populations. **2.** *Heraldry.* **eagle, golden eagle. 2.** a figure or representation of an eagle, much used as an emblem: *the Roman eagle.* **3.** a standard, seal, or the like bearing such a figure. **4.** one of a pair of silver insignia in the shape of eagles with outstretched wings worn by a colonel in the U.S. Army, Air Force, and Marine Corps and by a captain in the U.S. Navy. **5.** (*cap.*) a gold coin of the U.S., traded for investment, available in denominations of 5, 10, 25, and 50 dollars containing 1/10 to 1 troy ounce of gold, having on its reverse a picture of an eagle: first issued in 1986. **6.** a former gold coin of the U.S., issued until 1933, equal to 10 dollars, showing an eagle on its reverse. **7.** *Golf.* a score of two below par for any single hole. **8.** (*cap.*) *Astron.* the constellation Aquila. **9.** *Cards.* **a.** a representation in green of an eagle, used on playing cards to designate a suit in the pack additional to the four standard suits. **b.** a card of a suit so designated. **c. eagles,** the suit itself. —*v.t.* **10.** *Golf.* to make an eagle on (a hole). [1350–1400; ME *egle* < AF, OF *egle, aigle* < L *aquila,* n. use of fem. of *aquilus* dark-colored]

ea′gle eye′, **1.** unusually sharp visual powers; k ability to watch or observe. **2.** a person who has sh vision or who maintains a keen watchfulness. **3.** a watchfulness. [1595–1605]

ea-gle-eyed (ē′gəl īd′), *adj.* having keen vis [1595–1605]

ea′gle owl′, any of several large owls of the ge *Bubo,* having prominent tufts of feathers on each sid the head, esp. *B. bubo* of Europe and Asia. [1670–8

Ea′gle Pass′, a city in S Texas, on the Rio Gra 21,407.

ea′gle ray′, any of several rays of the family M obatidae, found in tropical seas and noted for the soar movements by which they propel themselves thro the water. [1855–60]

ea′gle scout′, a boy scout who has achieved highest rank in U.S. scouting. [1910–15, *Amer.*]

ea-gle-stone (ē′gəl stōn′), *n.* a concretionary lum ironstone about the size of a walnut, formerly believe be carried by eagles to their nests as a magical aid laying eggs. [1595–1605; EAGLE + STONE]

ea-glet (ē′glit), *n.* a young eagle. [1565–75, < MF *aiglet* (in heraldry). See EAGLE, -ET]

ea-gle-wood (ē′gəl wŏd′), *n.* agalloch. [1510– trans. of Fr *pão d'aguila* wood of agalloch, by confus of Pg *águia* eagle with *aguila* < Malayalam *agil* ag wood]

ea-gre (ē′gər, ā′gər), *n. Chiefly Brit.* a tidal bore flood. Also, **eager.** [1640–50; appar. repr. earlier ag eger, obscurely akin to *hyger, higre* (cf. AL (12th c tury) *higra* the tidal bore of the Severn); compared w OE *egor,* eager flood, high tide, though preservation o in modern forms is problematic]

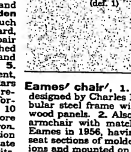
Ea-kins (ā′kinz), *n.* **Thomas,** 1844–1916, U.S. paint

eal-dor-man (ōl′dər mən), *n., pl.* **-men.** *Obs.* ald man. Also, **eal′der-man.**

Ea-ling (ē′ling), *n.* a borough of Greater London, E pal. 297,600.

EAM, National Liberation Front, a Greek undergrou resistance movement of World War II and political co tion of various leftist groups. [< ModGk *E(thnik A(peleutherētikó) M(étopo)*]

Eames (āmz), *n.* **Charles,** 1907–78, U.S. furniture aigner and architect.



Eames chair (def. 1)

Eames′ chair′, **1.** Also called **LCM chair.** a side ch designed by Charles Eames in 1946, having a slender t bular steel frame with a seat and back of molded pl wood panels. **2.** Also called **Eames′ lounge′ chair′,** armchair with matching ottoman designed by Char Eames in 1956, having separate headrest, backrest, a seat sections of molded plywood fitted with leather cus ions and mounted on a metal base that can swivel or t [1945–50, *Amer.*]

-ean, an element used to form adjectives from nou ending in *-ea*: *crustacean.* [< L *-ē(us)* (Gk *-eios*), *-ae(* (Gk *-aios*), *-e(us)* + *-AN*]

CONCISE ETYMOLOGY KEY: <, descended or borrowed from; >, whence; b., blend of, blended; c., cognate with, cf., compare; deriv., derivative; equiv., equivalent; imit., imitative; obl., oblique; r., replacing; s., stem; sp., spelling, spelled; resp., respelling, respelled; trans., translation; ?, origin unknown; *, unattested; ‡, probably earlier than. See the full key inside the front cover.